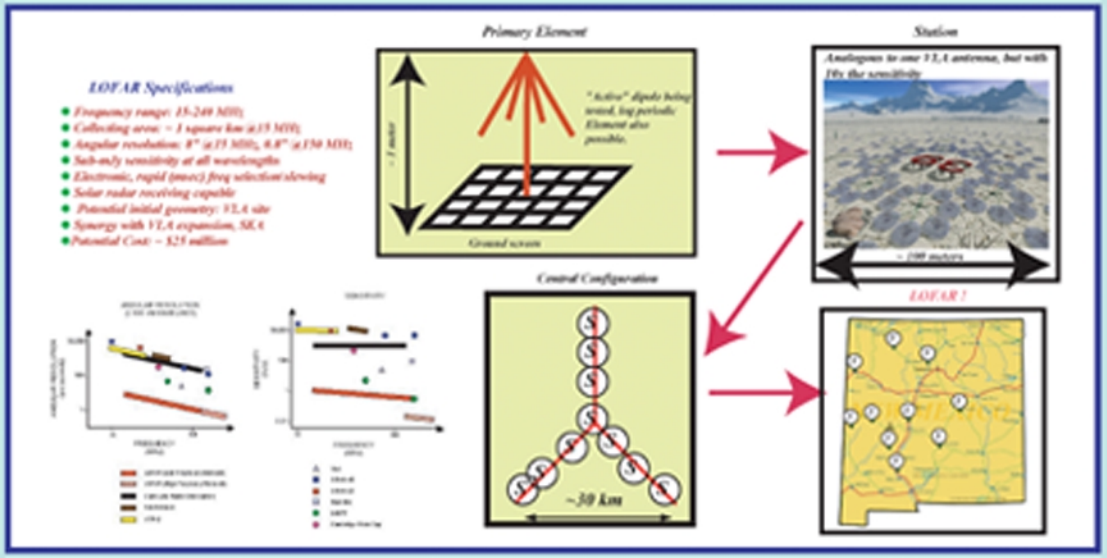
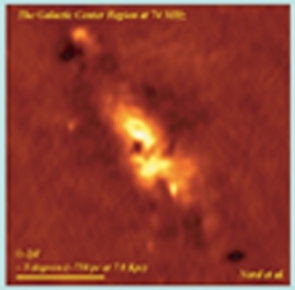
Low-Frequency Radio Astronomy

Low-frequency Radio Astronomy

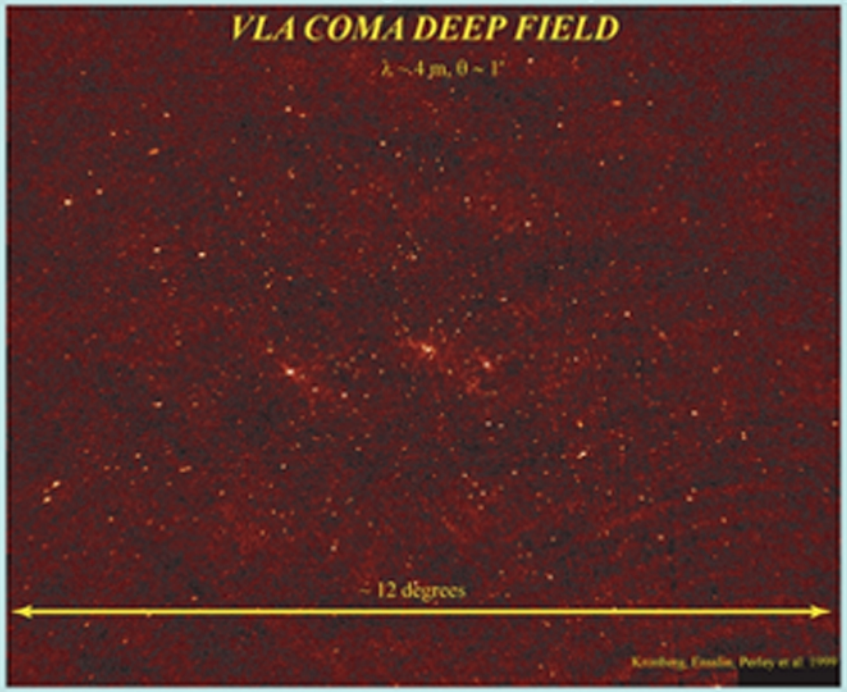
- *1933: Radio astronomy discovered by Jansky at 20 MHz*
- *Ionospheric effects had severely limited angular resolution and sensitivity.*
- *1990's: Self-cal shatters ionospheric barrier*
- *1998: New 74 MHz VLA system:*
  - *Angular resolution 25", sensitivity ~ 20 mJy (8 hrs), FOV ~ 10°*
  - *Efficient tracer of steep-spectrum (compact and extended) sources*
  - *Opens door for much more sensitive, broadband, electronic....*
- *2007: Low Frequency Array (LOFAR)*

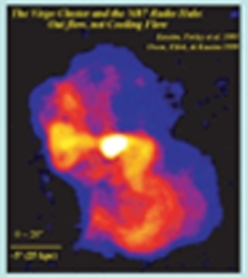


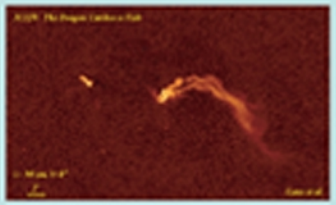
74 MHz VLA Galactic Astronomy (Supernova Remnants, Cosmic Rays, ...)



74 MHz VLA Extragalactic Astronomy (Halos, High-Redshift Objects)







<URL:http://lofar.nrl.navy.mil>